CIVIL-TECH CONSULTANTS AND ENGINEERS

Building & Highway Material Testing Laboratory

An ISO 9001:2008 Certified Company

NABL - Accredited Laboratory as per ISO / IEC-17025 : 2005

Job No.: CTCE/BBMP/W.No.12/JBC/WBM-II/2013-14 Date: 05.03.2014

REPORT

Client	:	**Asst. Executive Engineer,** Shettyhalli Sub Division, BBMP, Bangalore.
Agency		**M/s. J B Construction (Sri. Bharath.J),** Bangalore.
Name of the Work	:	Providing metalling in Vasanthappa Layout & Munivenkatappa Layout at Kammagondanahalli, in Ward No.12, in Shettyhalli Sub Division, BBMP, Bangalore.
Reference	:	EE/DD/WO/169/2013-14 Dated: 17.12.2013
Type of Mix	:	Water Bound Macadam (Grade-II Metal)
Date of Sampling	:	03.03.2014
Date of Testing	:	05.03.2014

1) SEIVE ANALYSIS :

IS Sieve design ation Size, mm	Percentage Passing for Graded Aggregate of Nominal size	Percentage by Weight Passing as per MORTH table 400-7
90mm	100.00	100.00
63mm	95.30	90-100
53mm	27.25	25-75
45mm	10.50	0-15
22.4mm	1.65	0-5

Note:

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Job No.: CTCE/BBMP/W.No.12/JBC/WBM-II/2013-14 Date: 05.03.2014

REPORT

Client	:	**Asst. Executive Engineer,** Shettyhalli Sub Division, BBMP, Bangalore.
Agency		**M/s. J B Construction (Sri. Bharath.J),** Bangalore.
Name of the Work	:	Providing metalling in Vasanthappa Layout & Munivenkatappa Layout at Kammagondanahalli, in Ward No.12, in Shettyhalli Sub Division, BBMP, Bangalore.
Reference	:	EE/DD/WO/169/2013-14 Dated: 17.12.2013
Type of Mix	:	Water Bound Macadam (Grade-II Metal)
Date of Sampling	:	03.03.2014
Date of Testing	:	05.03.2014

1) SEIVE ANALYSIS :

IS Sieve designation Size, mm	Percentage Passing for Graded Aggregate of Nominal size	Percentage by Weight Passing as per MORTH table 400-7
90mm	100.00	100.00
63mm	96.20	90-100
53mm	28.25	25-75
45mm	9.80	0-15
22.4mm	1.50	0-5

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Job No.: CTCE/BBMP/W.No.12/JBC/WBM-II/AIV/2013-14

05.03.2014

Aggregate Impact Value

IS: 2386 Part IV

Client	**Asst. Executive Engineer,** Shettyhalli Sub Division, BBMP, Bangalore.
Agency	**M/s. J B Construction (Sri. Bharath.J),** Bangalore.
Name of the Work	Providing metalling in Vasanthappa Layout & Munivenkatappa Layout at Kammagondanahalli, in Ward No.12, in Shettyhalli Sub Division, BBMP, Bangalore.
Reference	EE/DD/WO/169/2013-14 Dated: 17.12.2013
Source / Location	WBM Mix Plant, Bangalore
Type of Mix	Water Bound Macadam
Date of Testing	05.03.2014

Sl No.	Details	Trial No. 1	Trial No. 2	Average
1	Total weight of aggregate sample filling the cylindrical measure = W_1 g	388	389	
2	Weight of agregate passing 2.36 mm sieve after the test = W_2 g	87	88	
3	Weight of aggregate retained 2.36 mm sieve after the test = W_3 g	301	301	
4	Aggregate Impact value = percent fines	22.42	22.62	
	100* (W_2/W_1)%			22.52

Comments:

→ Maximum allowable Aggregate Impact value for Water Bound Macadam is 30%

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ಶೆಟ್ಟಿಹಳ್ಳಿ ಉಪವಿಭಾಗ, ದಾಸರಹಳ್ಳಿ ವಲಯ
ಬೃಹತ್ ಬೆಂಗಳೂರು ಮಹಾನಗರ ಪಾಲಿಕೆ
ಎಸ್.ಎಂ ರಸ್ತೆ, ರವೀಂದ್ರನಗರ, ಬೆಂಗಳೂರು

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Job No.: CTCE/BBMP/W.No.12/JBC/WBM-II/S-T/2013-14 05.03.2014

DETERMINATION OF FLAKINESS INDEX & ELONGATION INDEX OF COARSE AGGREGATES

Client	**Asst. Executive Engineer,** Shettyhalli Sub Division, BBMP, Bangalore.
Agency	**M/s. J B Construction (Sri. Bharath.J),** Bangalore.
Name of Work	Providing metalling in Vasanthappa Layout & Munivenkatappa Layout at Kammagondanahalli, in Ward No.12, in Shettyhalli Sub Division, BBMP, Bangalore.
Reference	EE/DD/WO/169/2013-14 Dated: 17.12.2013
Technical Reference	IS 2386(Part 1) 1963 (RA 2007)
Type of Mix	Water Bound Macadam (Grade-II Metal)
Date of Testing	05.03.2014

Civil-Tech Consultants & Engineers Bangalore

Result : Flakiness Index = **11.25%**

Elongation Index = **13.15%**

Result : Combined Flakiness & Elongation index 24.40%

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Job No.: CTCE/BBMP/W.No.12/JBC/WBM-III/2013-14 Date: 08.03.2014

REPORT

Client	:	**Asst. Executive Engineer,** Shettyhalli Sub Division, BBMP, Bangalore.
Agency		**M/s. J B Construction (Sri. Bharath.J),** Bangalore.
Name of the Work	:	Providing metalling in Vasanthappa Layout & Munivenkatappa Layout at Kammagondanahalli, in Ward No.12, in Shettyhalli Sub Division, BBMP, Bangalore.
Reference	:	EE/DD/WO/169/2013-14 Dated: 17.12.2013
Type of Mix	:	Water Bound Macadam (Grade-III Metal)
Date of Sampling	:	06.03.2014
Date of Testing	:	08.03.2014

1) SEIVE ANALYSIS:

IS Sieve design ation Size,mm	Percentage Passing for Graded Aggregate of Nominal size	Percentage by Weight Passing as per MORTH table 400-7
63mm	100.00	100.00
53mm	95.35	95-100
45mm	67.50	65-90
22.4mm	6.65	0-10
11.2mm	2.20	0-5

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Job No.: CTCE/BBMP/W.No.12/JBC/WBM/AIV/2013-14 08.03.2014

Aggregate Impact Value

IS: 2386 Part IV

Client	**Asst. Executive Engineer,** Shettyhalli Sub Division, BBMP, Bangalore.
Agency	**M/s. J B Construction (Sri. Bharath.J),** Bangalore.
Name of the Work	Providing metalling in Vasanthappa Layout & Munivenkatappa Layout at Kammagondanahalli, in Ward No.12, in Shettyhalli Sub Division, BBMP, Bangalore.
Reference	EE/DD/WO/169/2013-14 Dated: 17.12.2013
Source / Location	WBM Mix Plant, Bangalore
Type of Mix	Water Bound Macadam
Date of Testing	08.03.2014

Sl No.	Details	Trial No. 1	Trial No. 2	Average
1	Total weight of aggregate sample filling the cylindrical measure = W_1 g	389	390	
2	Weight of agregate passing 2.36 mm sieve after the test = W_2 g	89	90	
3	Weight of aggregate retained 2.36 mm sieve after the test = W_3 g	300	300	
4	Aggregate Impact value = percent fines	22.88	23.08	
	100* (W_2/W_1)%			22.98

Comments:

→ Maximum allowable Aggregate Impact value for Water Bound Macadam is 30%

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DETERMINATION OF FLAKINESS INDEX & ELONGATION INDEX OF COARSE AGGREGATES

Client	**Asst. Executive Engineer,** Shettyhalli Sub Division, BBMP, Bangalore.
Agency	**M/s. J B Construction (Sri. Bharath.J),** Bangalore.
Name of Work	Providing metalling in Vasanthappa Layout & Munivenkatappa Layout at Kammagondanahalli, in Ward No.12, in Shettyhalli Sub Division, BBMP, Bangalore.
Reference	EE/DD/WO/169/2013-14 Dated: 17.12.2013
Technical Reference	IS 2386(Part 1) 1963 (RA 2007)
Type of Mix	Water Bound Macadam (Grade-III Metal)
Date of Testing	08.03.2014

Result : Flakiness Index = **12.32%**

Elongation Index = **13.95%**

Result : Combined Flakiness & Elongation index 26.27%

Comments:

Maximum allowable Falakiness & Elongation Index for Water Bound Macadam is 30%

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